although the opening may be large. But if a catheter or other tube be introduced, or the opening be enlarged by a knife, a considerable quantity of pus is often suddenly discharged. These valves may be often temporarily displaced by a sound; and by its daily introduction, many abscesses of this description may be healed; but in more obstinate cases, the introduction of tubelets or repeated incisions are required.

As a general rule, it is not in subcutaneous abscesses that we find this valvular mechanism, but in the more important and deep-lying collections—as in empyema; deep cervical, post-mammary, or axillary abscesses; and in those of the abdomen and pelvis; and in periosteal and perineal collections. The valve may not always be found near the orifice, and the deeper it is placed the less are we disposed to pursue it with the knife. In such cases we must endeavour to widen and maintain the opening by means of metallic or caoutchouc tubelets, or sponge tents. In many places, as in the deep parts of the thigh, the neck, and the pelvis, it is preferable to produce forcible dilatation with a forceps to penetrating too far with the knife. Professor Roser has often had recourse to dilatation of this kind in deep-seated acute or chronic abscess, in the removal of osseous sequestra, and in operations for hernia.

Three kinds of these valves may be distinguished: 1. The *obliquely-placed valves* are the most common, and they may be called from their describer, Abernethy's valves. As physiological examples of such, the entrance of the ureter into the bladder, and of the parotid ducts into the mouth, may be adduced. In the lip-form fistulæ a similar valvular mechanism is brought into play, an example of which occurred in Dr. Beaumont's case of fistulous opening into the stomach. In a case of lip-form vesico-vaginal fistula which occurred to the author, a catheter could be easily passed along; but if air or water were injected into the rectum, no portion, owing to the oblique direction of the valve, entered the vagina. 2. Among the obliquely placed valves, the *wart-like* may be included. The mouth of the abscess is surrounded by spongy warts, from the midst of which the pus issues, while the admission of air is prevented by the warts pressing inwards so as to close the orifice. Such openings are not infrequently observed at the surface; and Professor Roser believes that, in many intestinal perforations, a similar mechanism prevails. 3. The *pad-like* valve, which is analogous to the valve of an air-pump, and an example of which is found in the valve of the prostate. It is this form which especially opposes the exit of pus, and calls for surgical interference.—*B. and F. Med.-Chirurg. Rev.*, Jan., 1857, from *Vierordt's Archiv.*, 1856.

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52. *Anatomy and Pathology of the adult Prostate.*—Mr. HENRY THOMPSON read some highly interesting observations on this subject before the Royal Medical and Chirurgical Society (Feb. 10th, 1857). The observations are based on upwards of sixty dissections, fifty of which were preserved and exhibited, the latter having been examined on a uniform plan.

Mode of examination.—The organ has been clearly dissected from adjacent parts. At the neck of the bladder, the muscular and other fibrous structures which surround the vesical orifice of the urethra were pared away pretty closely; some portions may have been left, as it does not appear possible to mark any absolute limit between prostate and bladder; anteriorly, although the same condition exists, it is less difficult to determine, approximatively, a boundary line. It was then measured, in three directions, as follows: from base to apex; in the extreme transverse direction; and in the extreme recto-pubic direction. Next, it was weighed. After this, the urethra was laid open, the existence of "concretions" sought in the canal, and afterwards in various parts of the prostatic substance. In most specimens, free sections were made with Valentin's knife, and a series of microscopical observations pursued in normal and abnormal conditions of the organ, illustrated by about 100 specimens, mounted on slides, with preservative fluid. The greater part of these prostates were taken from the bodies of elderly persons, as they consecutively appeared in the dead-house of a large institution, containing a due proportion of healthy and diseased lives, and no kind of selection was made. The particulars of age, weight, and measurement are arranged in tables exhibited. The observations made are presented under the following heads:—

I. *On the frequency with which enlargement appears in advanced age.*—The opinion has long been current that the enlargement of the prostate is one of the changes natural to old age. The specimens in question show the incorrectness of this view. Of the 50 specimens, 43 were taken from individuals of fifty years old and upwards. Of these 43, two were very small, probably atrophied, leaving 41. Of these 41, 14 exhibited enlargement, or a tendency thereto, manifested by the presence of tumour, more or less developed. Of these 14, 9 exhibited it in a very slight degree; in the remaining 5, enlargement was considerable, and gave rise to symptoms during life. Only one died of the affection.

Results, per cent.—An appreciable enlargement existed at the rate of 32 per cent.; notable enlargement, causing symptoms during life, at that of 12 per cent.

Of the 41 cases above fifty years of age, 29 were therefore unaffected in the slightest degree, and amongst them were the oldest individuals of the series—one at ninety, one at eighty-five, and two at seventy-nine years. It was then held to be established, that enlargement of the prostate, so far from being a change natural to old age, was an exceptional condition.

II. *The size and weight of the adult prostate.*—From the 50 cases of all adult ages, 14 being deducted as enlarged, and 3 as unnaturally small, 33 specimens remained healthy; the average weight of these was 4 drachms 38 grains; there was very little deviation, most of them ranging between 4 and 5 drachms.

Measurements.—Those given by authors generally were corroborated. The prevailing measurements were: From base to apex, 1¼ to 1½ inch; greatest transverse diameter, about 1¾ inch; greatest thickness, ⅝ to ⅞ inch; measurement from the centre of the urethra, outwards and downwards to the periphery of the organ, the line of section adopted in lithotomy, varied from ¾ to ⅞ inch.

III. *On the nature of a part commonly called "the third lobe."*—The history of this term, and its employment to indicate a distinct portion of the organ, is discussed at some length. An examination of the preparations exhibited does not warrant its use. There is no portion marked out with sufficient distinctness to entitle it to such an appellation. Its existence appeared to have been the subject of discussion during some years in the course of the last century, long before the time of Sir Everard Home, the result of which was then a decided denial of its existence; Morgagni especially, after repeated examinations, strongly opposing its claim to be considered a distinct part of the healthy organ. It was proposed now to term the stratum of prostate substance, which united the two lateral lobes behind and below the urethra, the "posterior median portion," as more correctly indicating the part referred to, and at all events as not involving assent to the disputable theory which assigned to it an independent character.

IV. *On the existence of distinct tumours in the prostate.*—The existence of solid tumours of different kinds is by no means rare in the prostate. They were pointed out by Sir E. Home, and by him supposed to be of the nature of apoplectic clots. Subsequently they have been regarded as fibrous tumours, and more lately it has been shown that some possess a structure approaching very nearly to that of the secreting tissue contained in the prostatic substance around. It is shown that enlargement of the prostate is very frequently associated with the development, more or less marked, of such growths in some one of three forms; in short, that the production of defined tumour is more frequently than otherwise the essential element of the pathological condition known as hypertrophy of the prostate. Of the fourteen enlarged prostates in the series, six exhibited numerous fibrous tumours in the substance of the lateral lobes; the others show polypoid enlargements, single, binary, or multiple, springing from the posterior median portion. The varieties may be briefly noticed as follows:—

1. A simple fibrous tumour, small, nearly isolated, made up of closely-packed

organic muscular fibres, with some areolar tissue, intimately resembling those found imbedded in the walls of the uterus.

2. A tumour composed of the same elements as the preceding, but containing, in addition, some of the glandular substance of the prostate, more or less imperfectly developed. This also may be imbedded, with or without a cyst, seeming sometimes to partake more of the character of a local enlargement, limited to a small portion or lobule of the prostate tissue, and only partially isolated. Although separating this class from the previous one for facility of reference, it is more than probable that the two nearly merge into each other at their adjacent limits, the latter approximating to the former by insensible gradations; so that some tumours which appear to be purely fibrous at first may be found to exhibit slight traces, in parts of its structure, of the glandular element. In *all*, however, the basis is *muscular fibre.*

3. A tumour composed entirely of the ordinary structures of the prostate fully developed, and enjoying activity of function in common with the rest of the organ. It assumes a pyriform shape even in its earliest stage, and springs from the posterior median portion. It may vary in size from that of a pea to that of a middle-sized pear. The analogies between these and the tumours of the uterus are considerable. Pointed out by Velpeau and others, modern researches seem to indicate them more plainly.

1. There is a ground of analogy derived from the two organs, prostate and uterus, being undoubtedly morphological equivalents in the two sexes, the analogue of the uterus and vagina combined being found in the prostatic vesicle or utricle of man. Numerous authorities are referred to in support of this view.

2. A stronger ground may be found in the fact, that the prostate and uterus are organs whose bulk is constituted by the same tissue—viz., the organic muscular fibre. No other organ in the body besides these two is similarly constructed by thick masses of this tissue; elsewhere, it is distributed in very thin layers.

3. Both organs exhibit growths identical both in external and histological characters. Isolated tumours imbedded in the substance of the organ, and polypoid outgrowths intimately connected with its structure, are seen in both. The occurrence, in some prostatic tumours, of a very small proportion of partially-developed gland tissue, intermingled with the muscular basis, should be regarded rather as an accident of situation than as indicating any material difference between those and the purely muscular tumours.

4. The two organs are subject to considerable hypertrophic enlargement, mainly consisting of their constituent fibrous and muscular elements, and in both this may be associated with some tumour formation, or may exist independently of it; may, in the latter case, be local or general, affecting the whole or certain parts of the organ, and, when local, affecting particular spots more commonly than others.

5. The two organs are liable to these changes after the prime of life has passed. Bayle, quoted by Rokitansky, and confirmed by Dr. Robert Lee, says that 20 per cent. of women, after thirty-five years, have fibrous tumours of some size in the uterus. These preparations show prostatic tumours in 30 per cent. of males after fifty.—*Med. Times and Gaz.*, Feb. 21, 1857.

OPHTHALMOLOGY.

53. *The Ophthalmoscope in Diagnosis.*—Probably practical men have not as yet found that assistance in the diagnosis of the disease of the posterior part of the eyeball that it was hoped the ophthalmoscope would afford. However, the instrument is of much value, and we could readily point out the probability of its increased usefulness. The following case will exemplify its application: A young man applied to Mr. Walton, because he could not see with the left